REMARKS/ARGUMENTS

In response to this Office Action the Applicant asks for the replacement of the previously filed set of claims by the here joined set of claims.

Status of the Claims

Claim 1 has been amended to recited the X is selected from glucose, fructose, mannose, galactose, ribose, maltose, glucosamine, sucrose and lactobionamide, a poly(ethylene oxide) chain comprising from 30 to 100 ethylene oxide units selected from the recited group.

Claim 2 has been amended to delete the terms "fructose" and "mannose".

Claim 3 has been amended to delete the phrase "30 to 100 ethylene oxide units, preferably from 50 to 60 units."

Claim 5 has been amended to delete the phrase the terminology "carnitine or a polyoxyethylene chain".

Claims 9-11 and 14 have been amended to delete the "use" terminology and to recite a process of treatment that includes the step of administering the compound of claim 1.

New claims 15 and 16 have been added and are directed to specific moieties for X and Y.

Specification

The specification has been amended to include a Cross Reference to related applications and to include a brief description of the drawings.

Rejections Under 35 U.S.C. § 112.

Claims 1-14 are rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement.

In claim 1, the choice of X has been limited to that which was priorly the object of claim 2, 3 and 4.

The Office Action acknowledges that the specification is enabling for X representing glucosamine, sucrose and lactobionamide. One of ordinary skill in the art on reading the specification as it pertains to any one of glucosamine, sucrose or lactobionamide ,would without undue experimentation, be able to apply these teachings to glucose, lactose, fructose, mannose, galactose, ribose or maltose. In other words, one of ordinary skill in the art knowing how to prepare the molecule (I) with one of those three saccharides, can without undue effort, apply the

same method to glucose, lactose, fructose, mannose, galactose, ribose or maltose. Sucrose is a disaccharide like lactose. It is made of a glucose and a fructose residue. Accordingly, the chemistry relating to the other monosaccharides can easily be extrapolated therefrom. As such, the specification provides sufficient teachings and guidance that would enable one of ordinary skill in the art to practice the claimed invention without undue experimentation. Additionally, Poly(ethylene oxide) has a substantially similar structure comprising C, H, and O carbohydrate molecule because it is based on C, H, O. As such, one of ordinary skill in the art would recognize that the teachings and methods of the specification can also be applied to poly(ethylene oxide) without undue experimentation.

With regards to Y, Claim 1 has been amended to recite to the list of the description p. 6, l. 3-8. Although examples have only been illustrated with regards to those listed on page 11, one of ordinary skill in the art could without undue burden apply this teaching to the spacer arms listed in p. 6. Additionally, the examples illustrate the case of a spacer arm which is an amide function, and this could easily be applied to analogous single functions like ester, urea, ether, thioether.

The case wherein Y is an alkyl amine is illustrated also and could be extended easily to Y = amine, alkyl ether, alkylthioether.

And the case wherein Y comprises two or more distinct functions and an alkyl chain is also illustrated: ether/alkyl/amide

ether/alkyl/amide/alkyl/ether

are two of the combinations taught in the examples. One of skill in the art could easily extend them to other combinations of bridges and alkyl chains.

With regards to Y', the Applicant wishes to stress that its choice is already limited to the list of p. 6, l. 10-13, the only difference between the list of claim 1 and the description p. 6, is that the choices are illustrated by the chemical formula in addition to the name of the functions.

Y is limited with regards to the chain length: it can be either simple functions (ester, amide, urea…amine) or a C_1-C_6 alkyl chain possibly interrupted by one or more functions.

The chain length is a maximum of 6 carbon atoms with some possible bridges selected

from a closed list of functions.

Y' is even more limited because it is selected from a closed list of 6 functions.

In addition, the claims here joined are limited to compounds with very similar structures: the analogies between the different mono or disaccharides have already been stressed. The phenyl nitrone part of the molecule is a non variable part of the molecule.

And the other variables have a small molecular weight as compared to the saccharide + phenylnitrone part of the molecule. So that the probability that biological properties of the molecules encompassed by claim 1 will be close to those of the molecules of the examples is very high.

As discussed above, the chemical variations around the molecules of the examples were only routine work for a skilled chemist. So that the Applicant respectfully submits that claims 1, 5, 15 and 16 satisfy the condition of enablement.

The disclosure shows that some compounds illustrated in the examples trap free radical activity, and have neuroprotective activity on nerve-muscle cocultures.

And pathological conditions linked to oxidative stress and the formation of oxygen-containing free radical species have been listed by Cross C.E., *Arch, Intern. Med.* (1987) **107**, 526-545 and by Anderson K.M., Ells G., Bonomi P., Harris J.E., *Medical Hypotheses* (1999) **52**, 53-57.

Among these have been listed: immune and inflammatory diseases, the ischemia-reperfusion syndrome, atherosclerosis, Alzheimer's and Parkinson's diseases, lesions due to UV and ionizing radiations, certain forms of chemical carcinogenesis and cellular aging.

The therapeutic effect of nitrones in the reduction and prevention of the damage caused by free radicals in biological systems was demonstrated in 1990 by Oliver C., Starte-Read P., Stadman E., Liu G., Carney J., Floys R. Proc. Acad. USA (1990) 87, 5144-5147. These authors demonstrated a decrease in the damage caused by cerebral ischemia in gerbils after α-C-phenyl-N-tert-butylnitrne (PBN) had been injected. Cerebral ischemias are accompanied by a large increase in the production of free radicals, which were trapped by the PBN, thereby forming spin adducts which were much more stable and therefore less reactive and toxic. PBN is the spin trap

to which the largest number of biological studies have related.

And the results obtained in biological tests for the compounds of the invention are superior to those obtained by PNB (see p. 17-p. 20).

Apprised of Applicants' teachings, one or ordinary skill in the art would understand and recognize that the necessary experiments to confirm the high potential of the molecules of the invention for the prevention or treatment of the above-mentioned pathologies are only routine experiments for the skilled professionals (see Ex Parte Jackson 217, USPQ 804 (Bd. Pat. App. 1982). "The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed." In the present case, the specification provides ample guidance to one of ordinary skill in the with respect to which direction any experimentation should proceed. Thus, practice of the claimed invention does not require undue experimentation and the claims as amended are fully enabled by the specification.

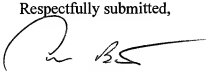
In view of the foregoing amendments and remarks, it is respectfully requested that the rejections under 35 U.S.C. § 112 be withdrawn.

Rejections of Claims 9-11 and 14 Under 35 U.S.C. § 112 and 101

Claims 9-11 and 14 have been rejected for the recitation of a use. Claims 9-11 have been amended to recite a process that includes the steps of treating a condition and/or patient that includes the step of administering the composition of Claim 1. Claim 14 has been amended to recite a method of capturing free radical with the composition of Claim 1. In view of these amendments, it is respectfully requested that the rejections under 35 U.S.C. §§ 112 and 101 be withdrawn.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



Timothy J. Balts
Registration No. 51,429

Customer No. 00826
ALSTON & BIRD LLP
Bank of America Plaza
101 South Tryon Street, Suite 4000
Charlotte, NC 28280-4000
Tel Charlotte Office (704) 444-1000
Fax Charlotte Office (704) 444-1111
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